Work Orden March-01-13 1:5		1.		*979	41*	,						Page 1
Revision ID: Item Name: Start Date: 3 Required Date: 3		Start Qty: 20.00 Req'd Qty: 20.00	*20*	Accept	*N900 Cust Item I Customer:		100)*	Setup	Start Stop	171	S1* S2*
		•	Date: \3-03-04			ate:		-		Start Stop		R1* R2*
Sequence ID/ Work Center ID		peration escription		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
Draw Nbr	Revisio	on Nbr										
D1048	Rev A											
*100 *100* Waterjet FLOW CNC Waterjet 304 - 063		Dwg Rev: Prog Rev:	er Dwg D1048 A f necessary	0.00	,			32		3	a/	JM13-6
110	Q	C2- Inspect parts off	machine FAI/FAIB	0.00								/
110 QC Quality Control		Мето		0.00				32	<u>.</u>		4/	Jn13-6-
	-			927	•					•		
120	Q	QC8- Inspect parts - se	cond check	0.00								
120		Memo		0.00 13.6	7			3				

Quality Control

								DQA:	Date:	
NCR: Ye	s / No			WORK ORDER NON-	-CONFOF	RMANCE / UF		QA Closed:	Date:	
Work Order	•			DISPOSITION			AĞAINST DEI	PARTMENT	/PROCESS	
Work Order	•			Rework	7	Skid-tube	Crosstube		Water Jet	Engineering
Part No).			Scrap	1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
				Use-as-is	The	moforming	Finishing	Rec/Sto	re/Packaging	Other
NCR No)			Work Order Update		Large Fab	Composite		Supplier	
Root				Description of work order update	Initial	I A	ction	Sign &		
Cause	Date	Step	Qty	or Non-conformance	Chief En	1	cription	Date	Verification	QC Inspector
Doc/Data				·						
Equip/Tooling										•
Operator										
Material										
Setup				ŀ						
Other										
Process						-				
Supplier										
Training										
Unapproved			<u> </u>				· · · · · · · · · · · · · · · · · · ·			<u> </u>
					FAULT CAT	EGORY				Ā

Landi	ng (iear -	General	_		_		-
		Bending	Bend	Grain		Ovalized		Pressure/Forced
		Centre Not Concentric to O/S	BOM/Route	Hardware		Over/Under tolerance		Temperature/Cure
		Cracks .	Broken/Damaged	Inspection Incomplete		Part Incorrect		Weld
		Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear		Part Lost/Missing	L	Wrong Stock Pulled
		Cuffs	Contamination	Maintenance		Part Moved		
		Heat Treat	Countersink	Mislabeled	L	Positioned Wrong		_
		Inspection Strip in Tube	Cut Too Short	Misread		Power Loss/Surge		Other
		Ripples in Bend	Drill Holes	Offset		,		
		Torque Waves in Extrusion	Drawing	Out of Calibration				
		Turning Sequence	Finish	Out of Sequence				
		Wave/Twist in Tube	Folio	Outside Dimensions				

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Work Orde		7941		*970	141*			e.			Page 2
Item ID: Revision ID:	D1048			Accept	*N900	040	100) * s	etup Star	1 4	S1*
Item Name:	Saddle				:				2101		S7 [*]
Start Date:	3/01/13	Start Qty: 20.00	*20*		Cust Item I	D:					
Required Date:	3/15/13	Req'd Qty: 20.00	*20*		Customer:		,				
Reference:			·								
Approvals: Process Plan:		an:	Date: _	Tooling:		nte:	 	R		^t ' *N	R1*
	QC:				Da	ıte:			Stop	` *N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*130 Small Fab		Small Fab Memo		0.00					_ •		
Small Fab			required. Break all sharp co	_	dwg.						
140				0.00							FF
140		NC BRAKE						32	d	/.	FF 3-06-10
Brake NC		Memo		0.00					· — У—) <u></u> , .
Brake NC		Form as per	dwg D2010 using DT8053	p							
150		QC5- Inspect part comple	eteness to step on W/O	0.00	·						(DAs 09
150								_3	Ba	0.10	₹ 09
QC Quality Control		Memo		0.00							0-

NCR:	Yes	/	No
11011.		,	

DQA: Date:

NCR:	es ,	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UF	PDATE	QA Closed:	Date:	
Mank Ond						DISPOSITION				AGAINST DE	PARTMENT/	PROCESS	
Work Orde Part N	_					Rework Scrap		ľ	Skid-tube Machining	Crosstube Small Fab	4	Water Jet J. Eng. Coor.	Engineering Quality Other
NCR N	lo					Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Descr	iption of work order update	1	nitial	í	ction	Sign &	:	
Cause		Date	Step	Qty	.	or Non-conformance	Ch	ief Eng	Des	cription	Date	Verification	QC Inspector
oc/Data quip/Tooling					:								
perator Naterial													
etup Ither													
rocess													
upplier													
raining										•			
napproved		·							<u> </u>				
							FAUL	T CATE	GORY				
Landi					 	General		1		_	7		7-
		Bending				Bend	<u> </u>	Grain		-	Ovalized		Pressure/Forced Temperature/Cure
		Centre No	it Concer	ntric to	^{O/S}	BOM/Route	\vdash	Hardwa		<u> </u>	Over/Under Part Incorred		Weld
		Cracks Crushed/C	`rimnod		-	Broken/Damaged	-	4	ion Incomplete tions Incomplete	/linclear	Part Lost/Mi	-	Wrong Stock Pulled
		Tusnea/C Cuffs	.mpea.		-	Contamination	\vdash	Mainte		- Circlear	Part Moved	331116	
	-	leat Trea	t		-	Countersink	\vdash	Mislabe		<u> </u>	Positioned V	Vrong	
	_	nspection		Tube	-	Cut Too Short		Misread			Power Loss/		Other
		Ripples in				Drill Holes		Offset		<u> </u>	.		•
		orque W		xtrusio	n	Drawing		4	Calibration				
		urning Se				Finish		Out of S	Sequence				
		Vave/Twi				Folio		Outside	Dimensions				

Work Ord		7941		*970	141*			Page 3
Item ID: Revision ID: Item Name:	D1048 Saddle			Accept	*N90004010	()* Setup	Start Stop	*NS1* *NS2*
Start Date: Required Date Reference:	3/01/13 e: 3/15/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item ID: Customer:			14(1)
Approvals:		an:	Date:		Date: Date:	Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center 160 *160* Powdercoat Powder Coating	Ц80	Operation Description Black Sandtex(Ref:4.3.5. Memo START TIM OVEN TEM FINISH TIM	7 / 45 E:	Set Up/ Run Hours 0.00	Tool ID Tool # Plan Code	Qty Qty	y N	Reject Insp. Number Stamp
170 QC Quality Control		QC3- Inspect Part Finish Memo	•	0.00		32x	_d	JU 13/0
180 *180* Packaging		Identify as per dwg & Sto	ock Location:	0.00		_32x_0	h	M.D. 13-06-

Packaging

											DQA:	Date:	
NCR: Y	es .	/ No				WORK ORDER NON-	COI	VFOR	MANCE / UP				
					_						QA Closed:	Date:	
Work Ordo						DISPOSITION				AGAINST DEI	PARTMENT	/PROCESS	
Work Orde Part N	_					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N						Use-as-is Work Order Update		Thern	noforming Large Fab	Finishing Composite		re/Packaging Supplier	Other
New	•0. –					Work Order opudie	الـ		20186 100				
Root					Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													1
Equip/Tooling												,	
Operator			ļ										
Material													
Setup			1										
Other													
Process													ļ
Supplier													
Training													
Unapproved			<u> </u>							,			<u> </u>
							AUI	T CATE	GORY				
Landir	ng Ge	ear			_	General		-			1	<u></u>	7
1 1	E	Bending				Bend	1	Grain			Ovalized		Pressure/Forced

Hardware

Maintenance

Out of Calibration
Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Inspection Incomplete

Instructions Incomplete/Unclear

BOM/Route

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Burrs

Broken/Damaged

Over/Under tolerance

Part Incorrect

Part Moved
Positioned Wrong

Part Lost/Missing

Power Loss/Surge

Temperature/Cure

Wrong Stock Pulled

Weld

Other

III /CODA (C.O Pa			O A /ALCONALO	D C
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Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Centre Not Concentric to O/S

Work Orde				*979	941*							Page 4
Item ID: Revision ID: Item Name:	D1048 Saddle			Accept	*N900	040	100)* S	Setup	Start Stop	1 41 1	S1* S2*
Start Date: Required Date: Reference:	3/01/13 3/15/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item I Customer:	D:						- -
Approvals:	Process	s Plan:	Date:	Tooling:	Da	ate:		F	Run	Start	*N	R1*
	QC:_		Date:	SPC (Y/N):	Da	ate:				Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
190		QC21- Final Inspection -	Work Order Release	0.00								
190 QC Quality Control		Мето		0.00				M(ンゴ		S-06.	12 -12 wr 6-11

								DQA:	Date:	
NCR: Y	'es	/ No			WORK ORDER NON-C	ONFOR	MANCE / UPDATE			
,								QA Closed	Date:	
Work Ordo					DISPOSITION		AGA	INST DEPARTMENT	/PROCESS	
Work Orde	er				Rework		Skid-tube Cross	tube	Water Jet	Engineering
Part N	lo.				Scrap		⊢	├	od. Eng. Coor.	Quality
					Use-as-is		· —	shing Rec/Sto	re/Packaging	Other
NCR N	lo				Work Order Update		Large Fab Comp	osite	Supplier	
				1			A -1:	Cian 9	T	
Root					Description of work order update	Initial	Action	Sign &		
Cause	\perp	Date	Step	Qty	or Non-conformance	Chief Eng	Description	Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling	\Box									
Operator	_									
Material	_									·
Setup										
Other										
Process	\sqcup									
Supplier	_		1			:				
Training	\Box									
Unapproved									ļ <u></u>	
					FA	AULT CATE	GORY			
Landir	ne G	ear			General					

Positioned Wrong Heat Treat Countersink Mislabeled Other Power Loss/Surge Cut Too Short Inspection Strip in Tube Misread Drill Holes Ripples in Bend Offset Drawing Out of Calibration Torque Waves in Extrusion Finish Out of Sequence Turning Sequence Folio Outside Dimensions Wave/Twist in Tube

Grain

Hardware

Maintenance

Inspection Incomplete

Instructions Incomplete/Unclear

Bend

Burrs

BOM/Route

Contamination

Broken/Damaged

Ovalized

Part Incorrect

Part Moved

Part Lost/Missing

Over/Under tolerance

Pressure/Forced

Weld

Temperature/Cure

Wrong Stock Pulled

Bending

Cracks

Cuffs

Crushed/Crimped.

Centre Not Concentric to O/S

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

March-01-13 1:51:22 PM

Work Order ID:

97941

Parent Item:

D1048

Parent Item Name:

Saddle

Start Date: 3/01/13

Required Date: 3/15/13

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP: B02.02.22Re-formatNG

IPP Rev:C. Now on Wateriet, 06-12-06, JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			100	sf	589.6560	0.018	0.378948 ○· 5		a/	Jn3-6
				Location		Loc Oty	<u>Lo</u>	c Code				,	
				MAT020		589.656							
				12224	15	5.156							
				12313	36	140.8							
				12442	28	123.7							
				12457	72	320							
				125	599				125	599			

NCR:	Yes	/ No				WORK ORDER NON-C	100	NFORM	/IANCE / UP	DATE			
		, -									QA Closed:	Date	•
Work Order:			DISPOSITION		AGAINST DEPARTMENT/PROCESS								
Work Order: Part No.				Rework Scrap Use-as-is		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing		Water Jet Prod. Eng. Coor. Rec/Store/Packaging		Engineering Quality Other			
NCR No.				I I I I I I I I I I		Large Fab Composite		Supplier					
Root					Descri	otion of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Éng	Desc	ription	Date	Verification	QC Inspector
Doc/Data					·								
Equip/Tooling													
Operator											İ		
Material													
Setup													
Other				,					•				
Process				·									·
Supplier													
Training													
Unapproved											<u> </u>	<u>.</u>	
							AUL	T CATE	GORY				
Landi	_	1			_	General		1		<u> </u>	1	_	¬₋
	Bending			Bend	Grain		ļ	Ovalized	<u> </u>	Pressure/Forced			
	Centre Not Concentric to O/S			BOM/Route	Hardware		<u> </u>	Over/Under tolerance		Temperature/Cure			
Cracks			Broken/Damaged	Inspection Incom			_	Part Incorre	<u> </u>	Weld			
Crushed/Crimped.				Burrs	Instructions Incomplete/Unclear		'Unclear	- · · · · · ·		Wrong Stock Pulled			
	Cuffs			<u></u>	Contamination	Maintenance				Part Moved			
	Heat Treat			<u> </u>	Countersink	Mislabeled			Positioned \		_		
	Inspection Strip in Tube			. [Cut Too Short	Misread			Power Loss,	'Surge	Other		

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

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DART AEROSPACE LTD	Work Order:	97941		
Description: Clamp	Part Number:	D1048		
Inspection Dwg: D1048 Rev: A		Page 1 of 1		

	FIRS	ST ARTICLE	INSPEC	LION CHE	ECKLIST		
X First Article Prototype							
Drawing Tolerance		Actual Dimension	Accept	Reject	Method of Inspection	Co	mments
0.750	+/-0.010	6.757	/		ν	Jame) I
2.125	+/-0.010	2.131			ν		
1.705	+/-0.010	1.708	1		V		
0.375	+/-0.010	0.371	1		V		
Ø0.203	+0.005 x -0.001	0.303	/		V		
leasured by:	Jm/A	Audited by:	27		Prototype A	pproval:	N/A
Date:	13-6-7.	Date:	13.6	7		Date:	N/A
Rev Date A 09.04.3	Change 0 New Issue					evised by	Approve

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